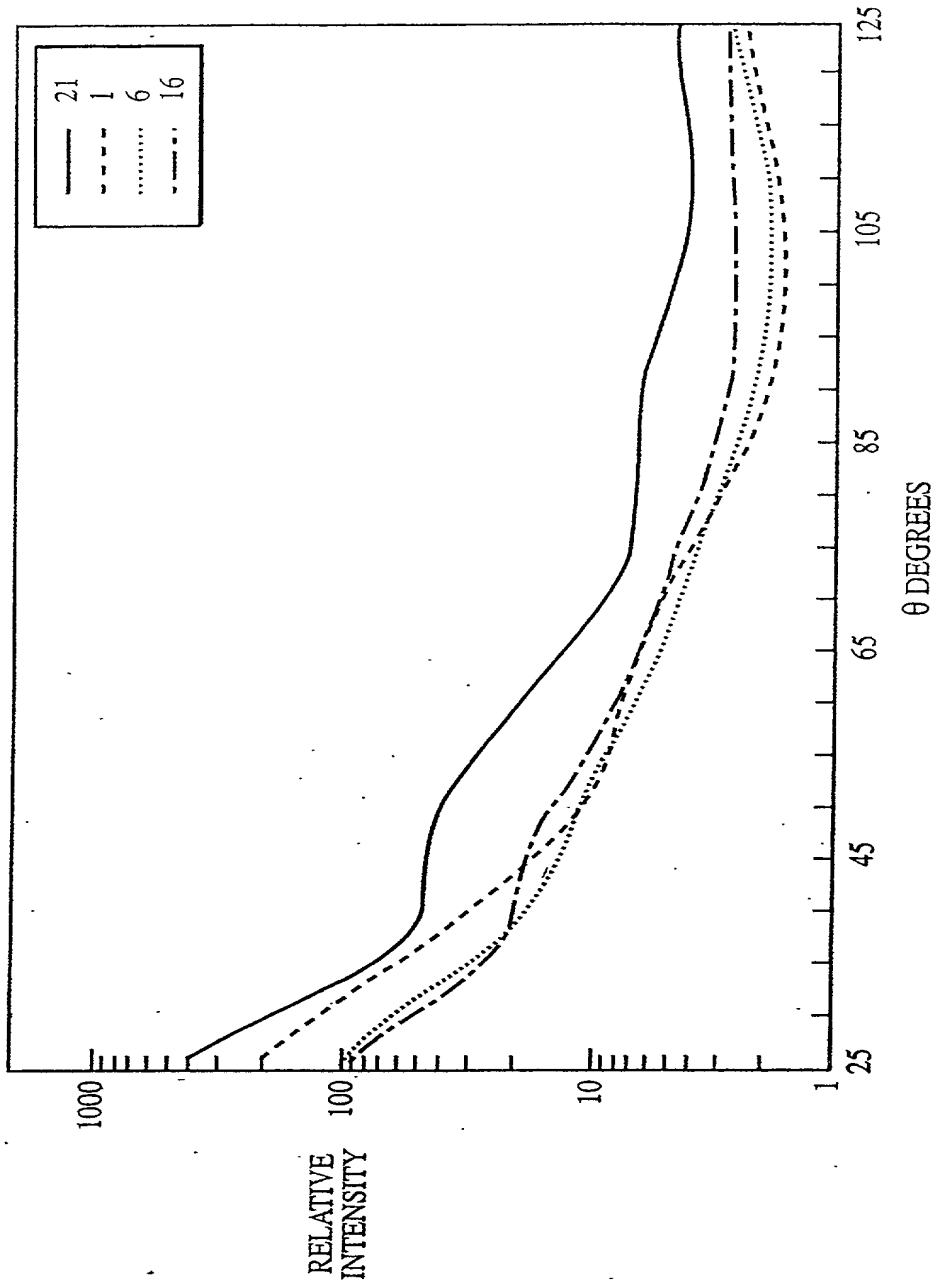


#4



**Title:** Methods, Compositions and Kits for Biological Indicator of Sterilization  
**Inventors:** Ira Cecil Falkner, et al.  
**Appl. No.:** 10/091,260  
**Atty Docket No.:** 61-2U5 Cust. No. 000570

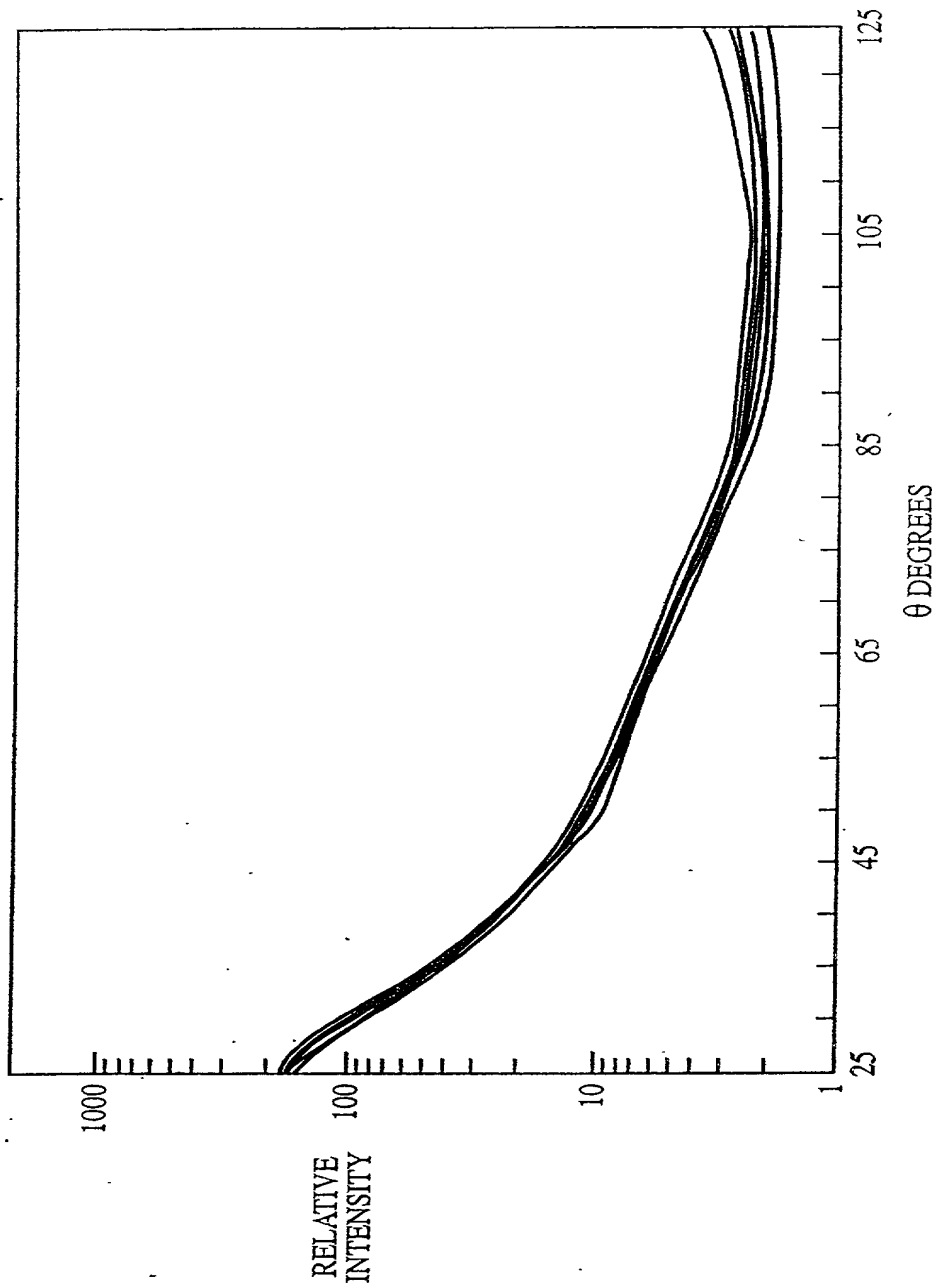
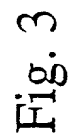


Fig. 2



20020826



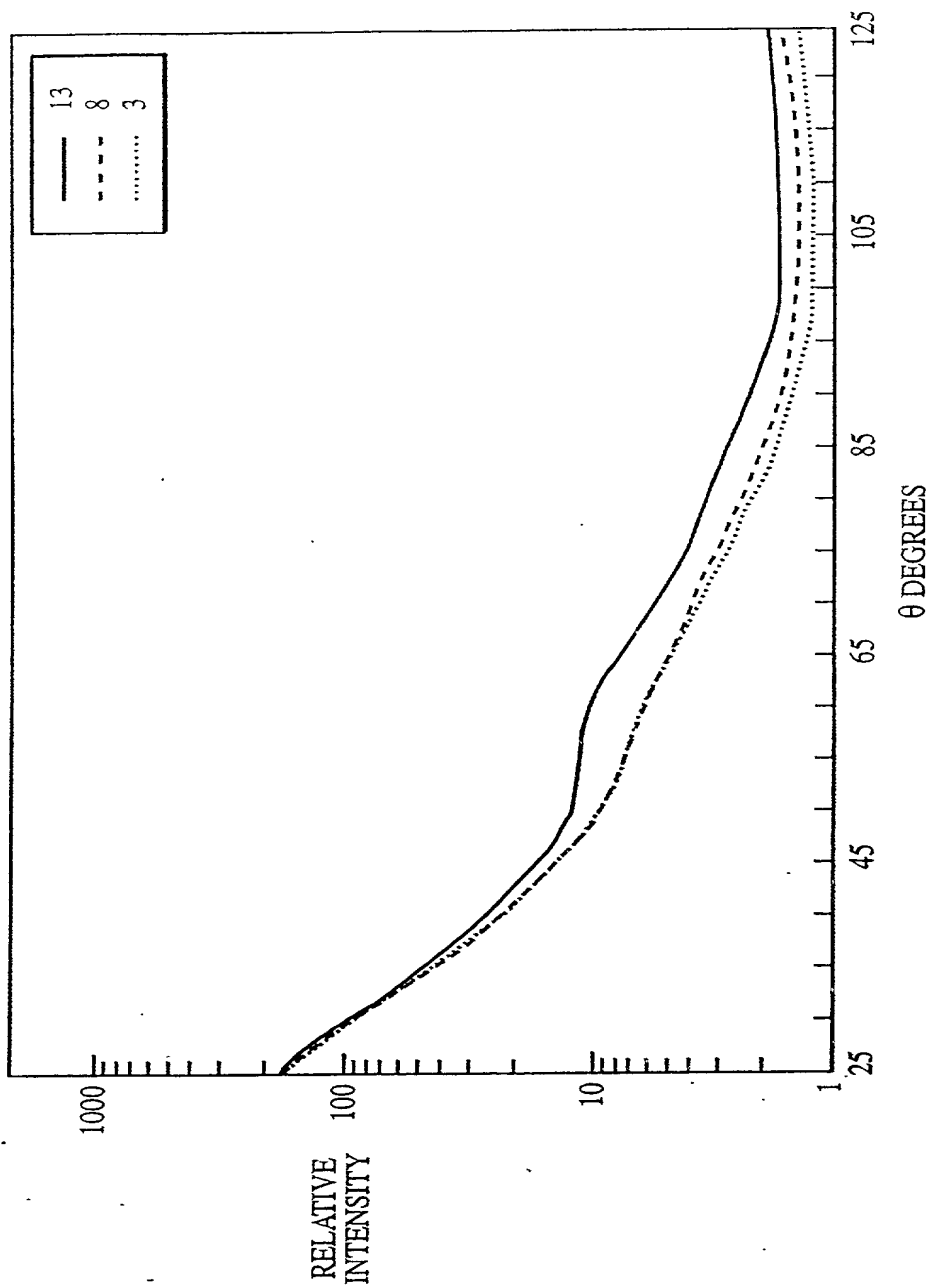
[illegible]

Fig. 4





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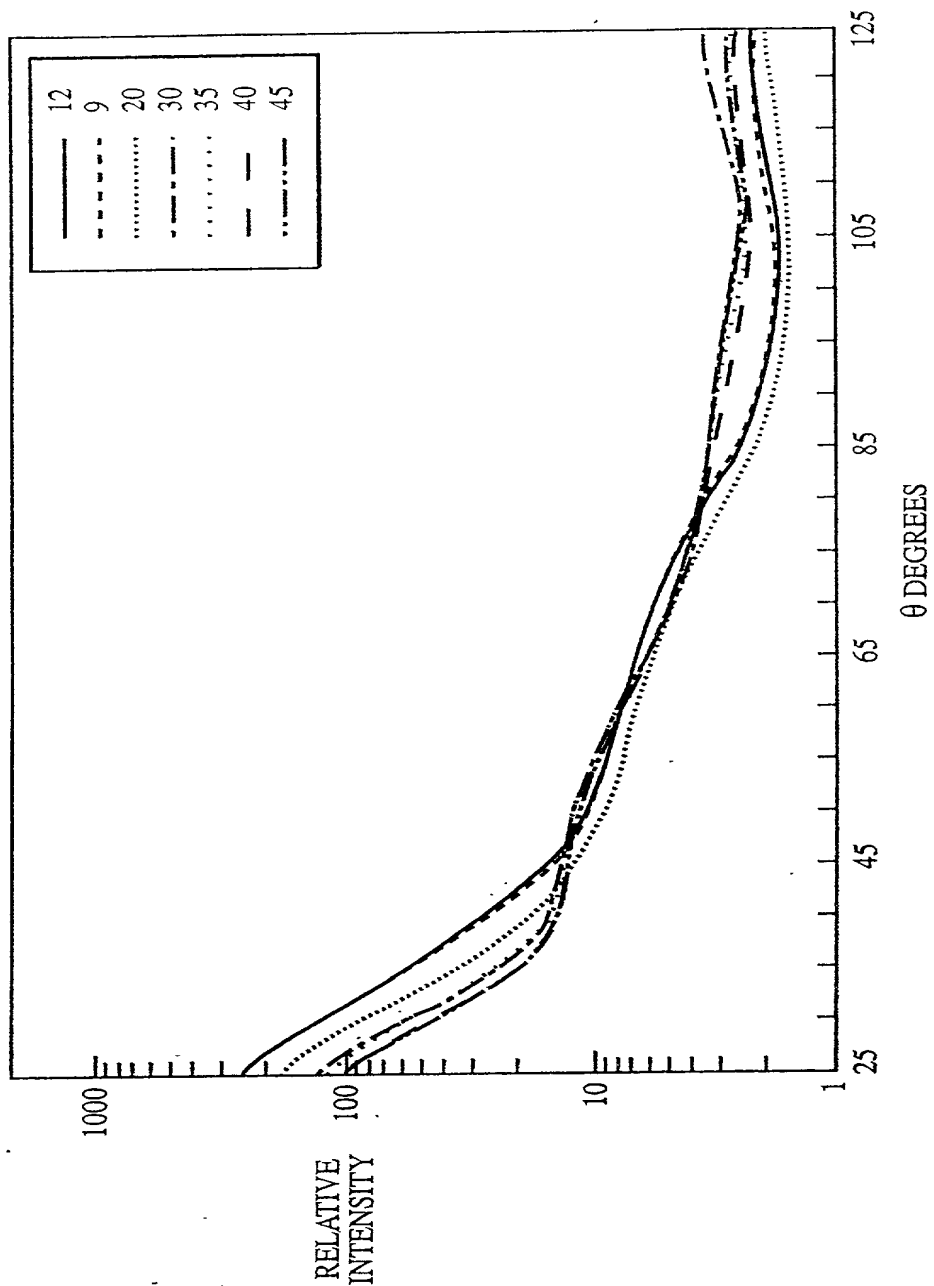


Fig. 5

Indicator of Sterilization Inventors: Ira Cecil

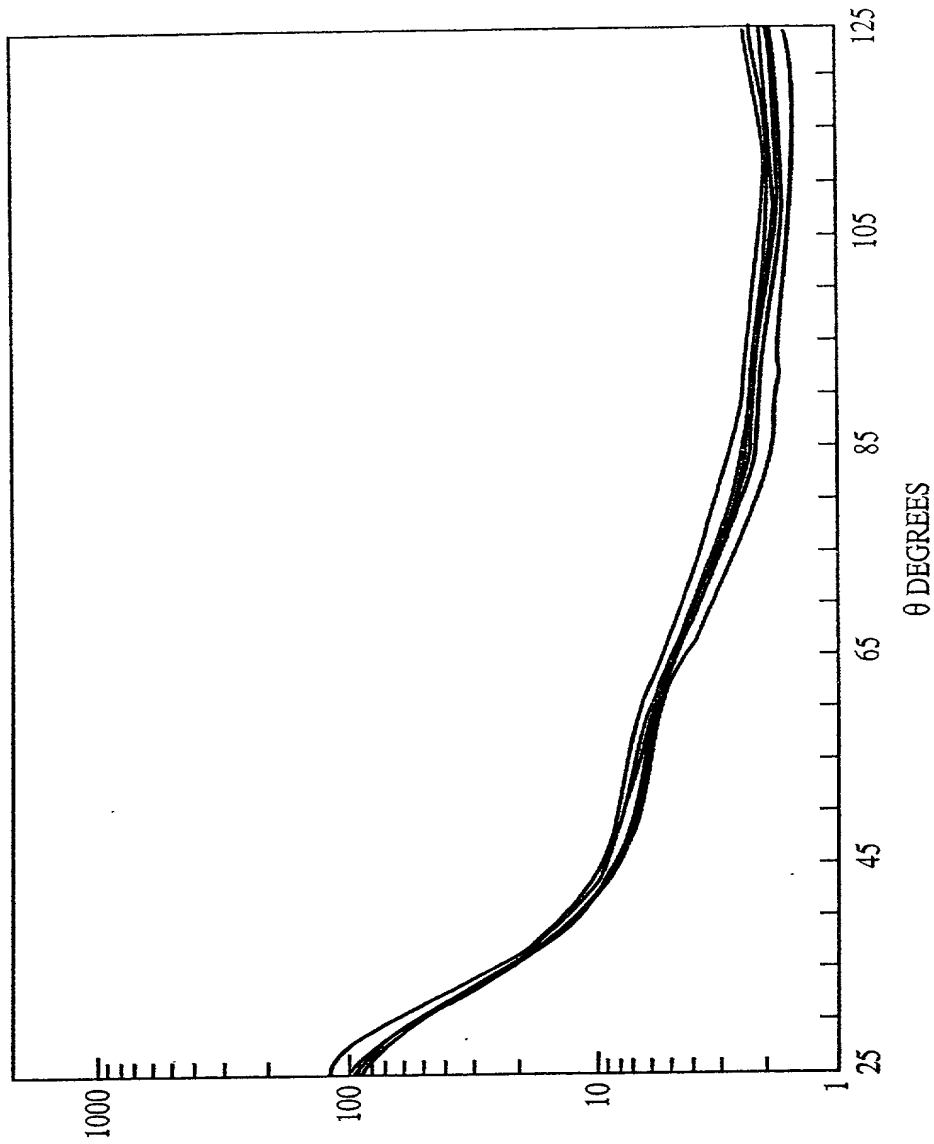
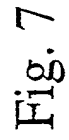
RELATIVE  
INTENSITY

Fig. 6

Figure 1 consists of 12 histograms arranged horizontally, labeled  $x_1$  through  $x_{12}$ . Each histogram shows the frequency (count) of non-zero elements in the vector  $x_k$ . The x-axis for each histogram is labeled  $x_k$  and ranges from 0 to 10. The y-axis is labeled 'count' and ranges from 0 to 10. The distributions are roughly bell-shaped and centered around 5, with the peak count increasing from 10 for  $x_1$  to 10 for  $x_{12}$ .





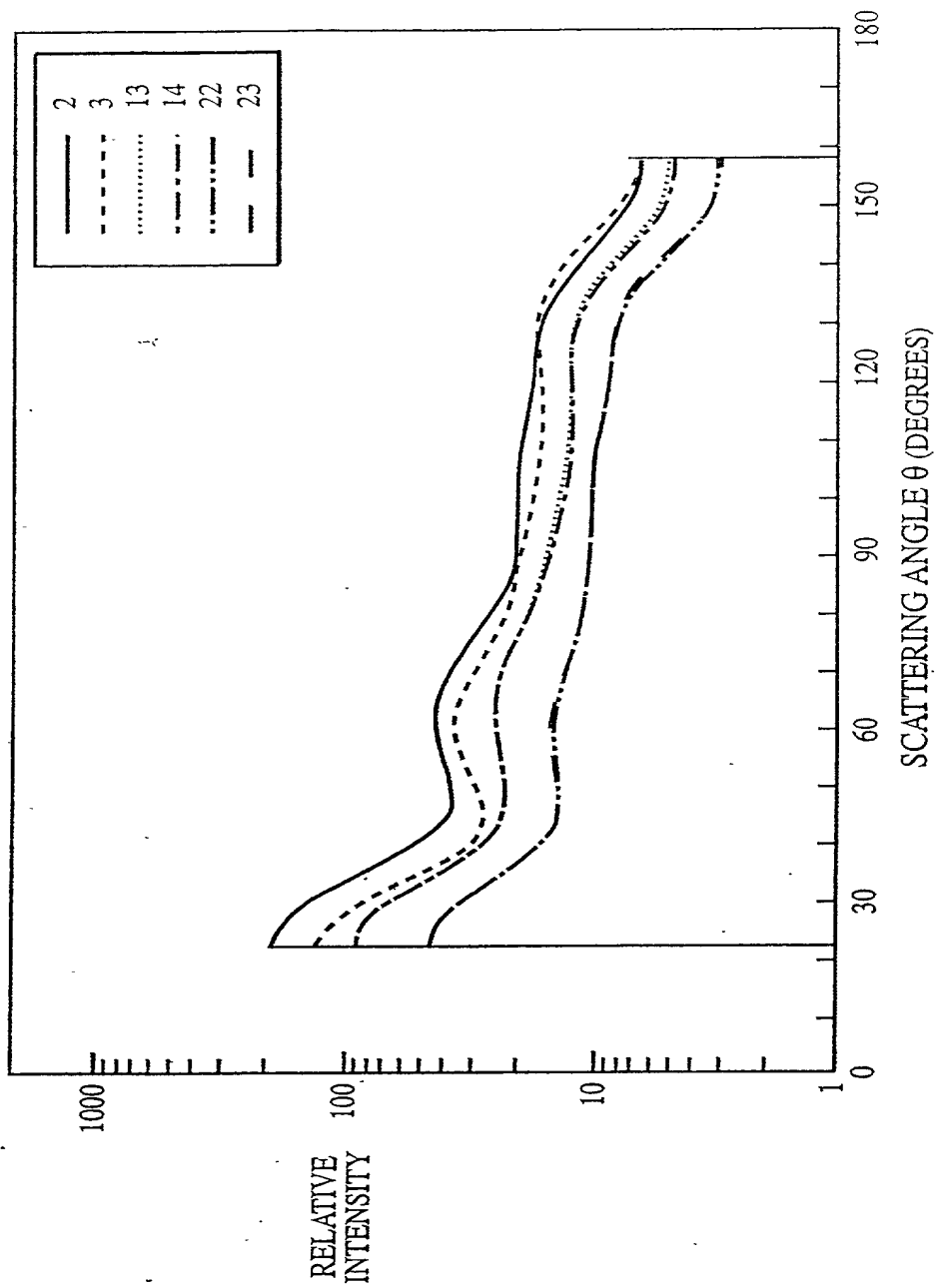
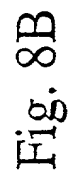
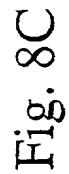
[illegible]

Fig. 8A







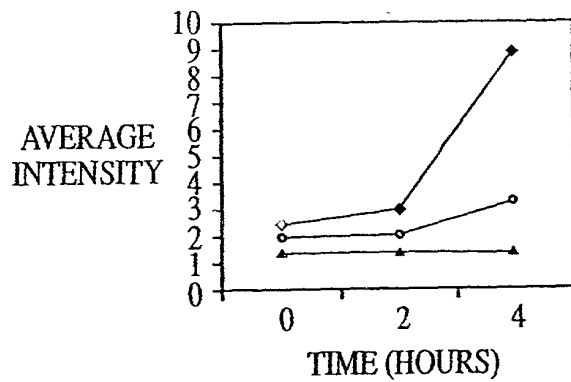


Fig. 9A

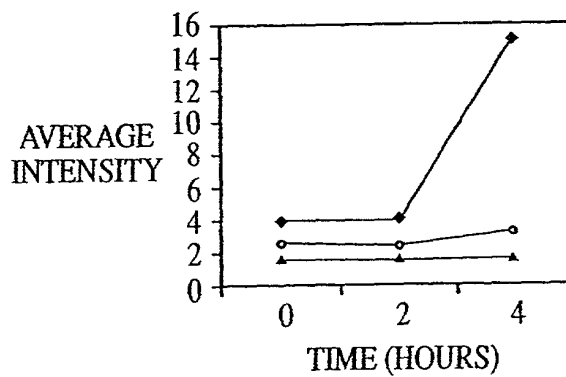


Fig. 9B

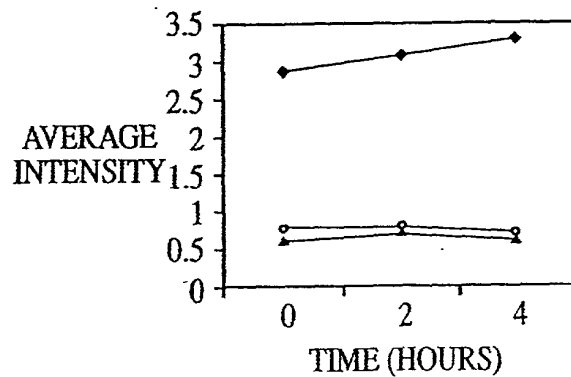


Fig. 9C



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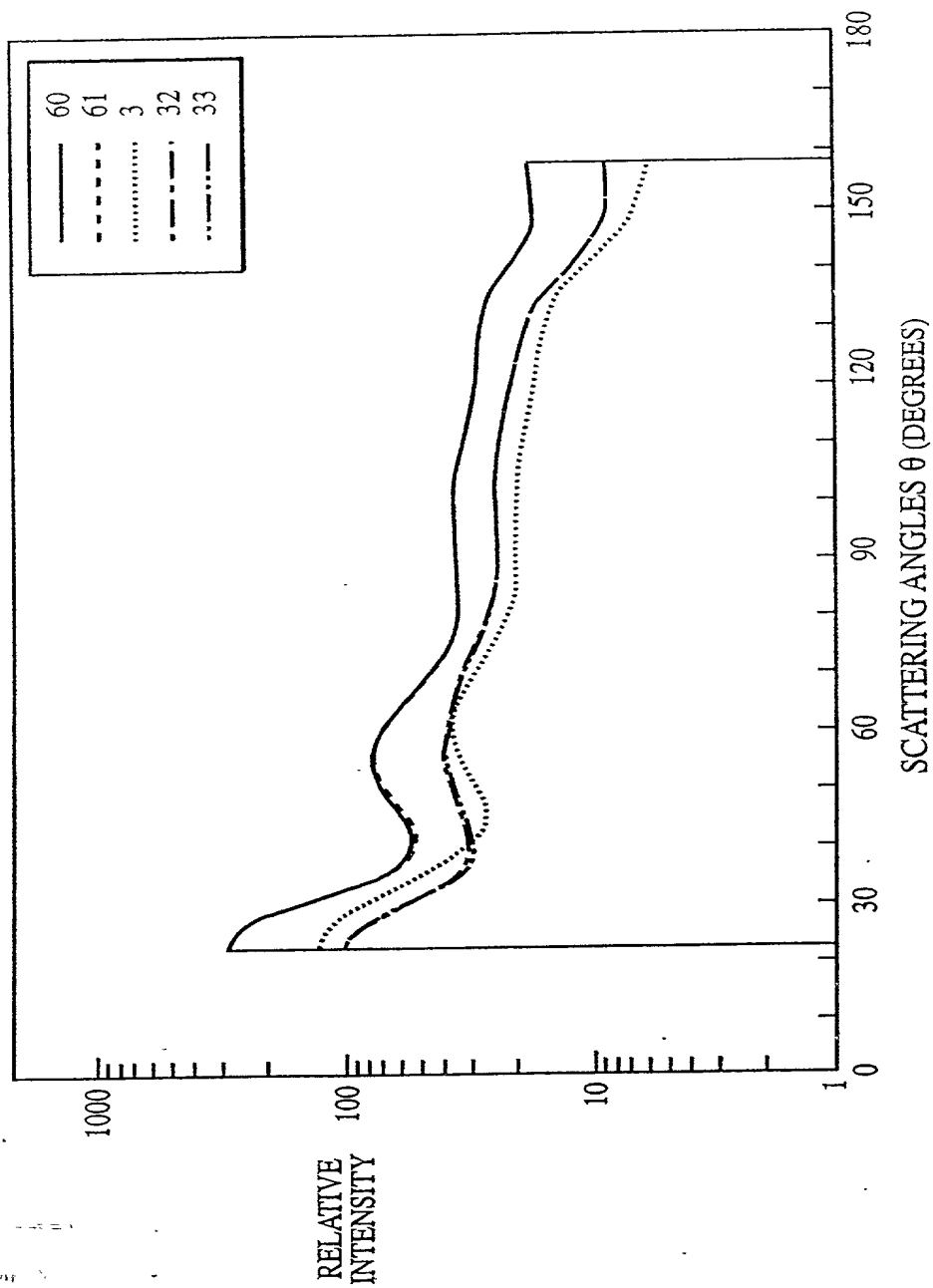


Fig. 10

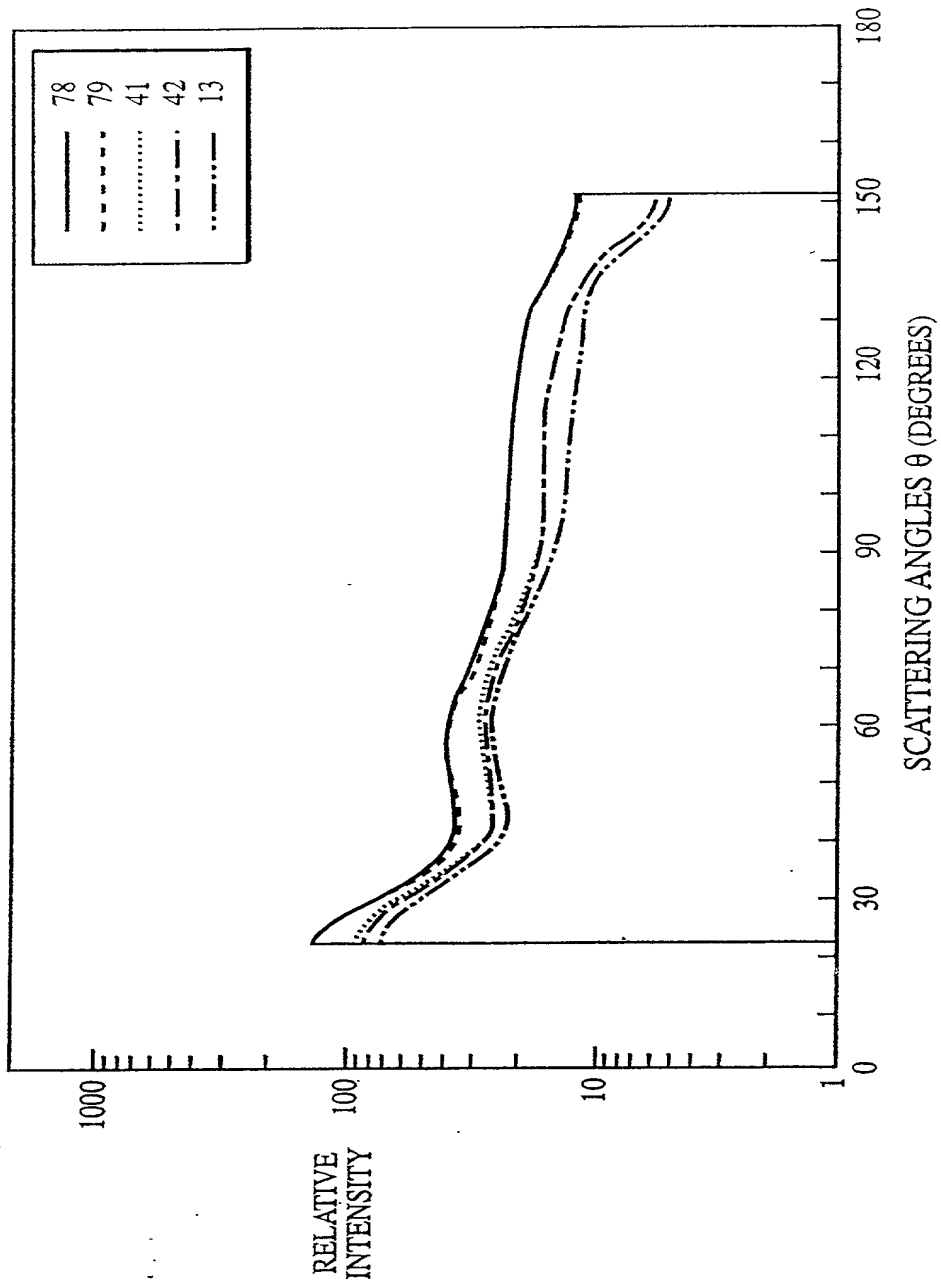


Fig. 11



20020826

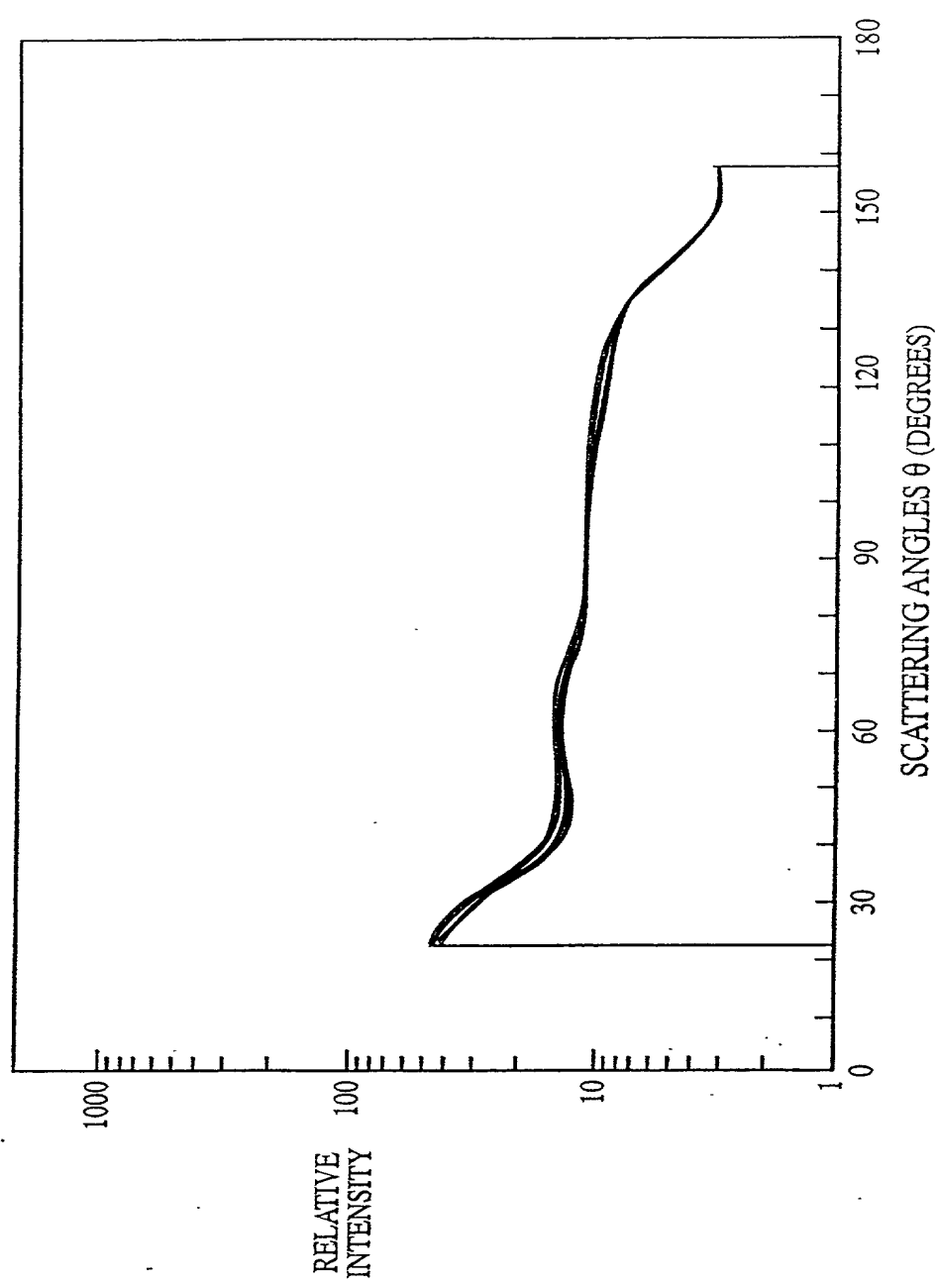
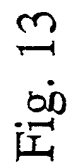


Fig. 12

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED





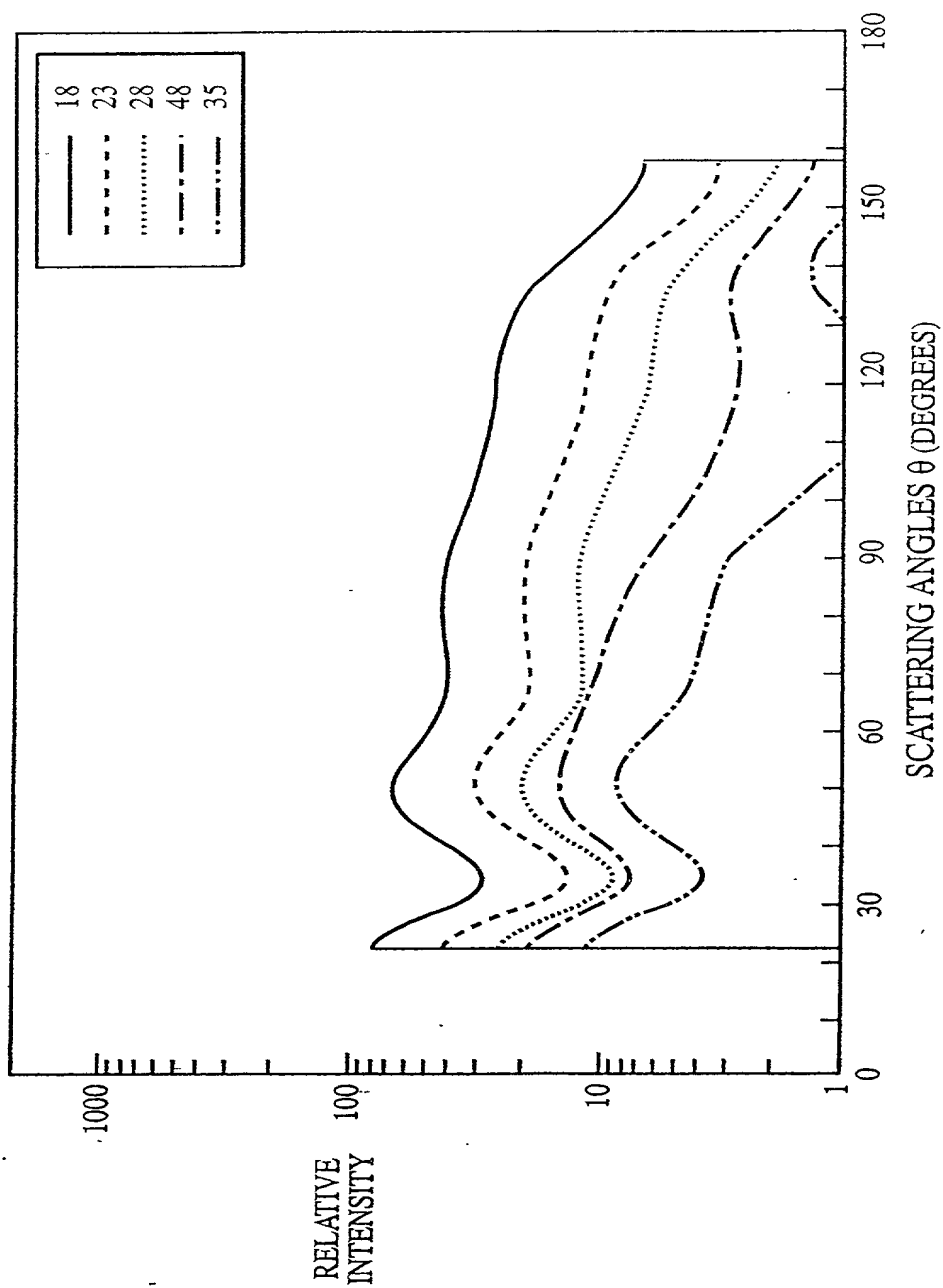


Fig. 14



REPLICATES OF ICF SAMPLES

Replicates of ICF Samples

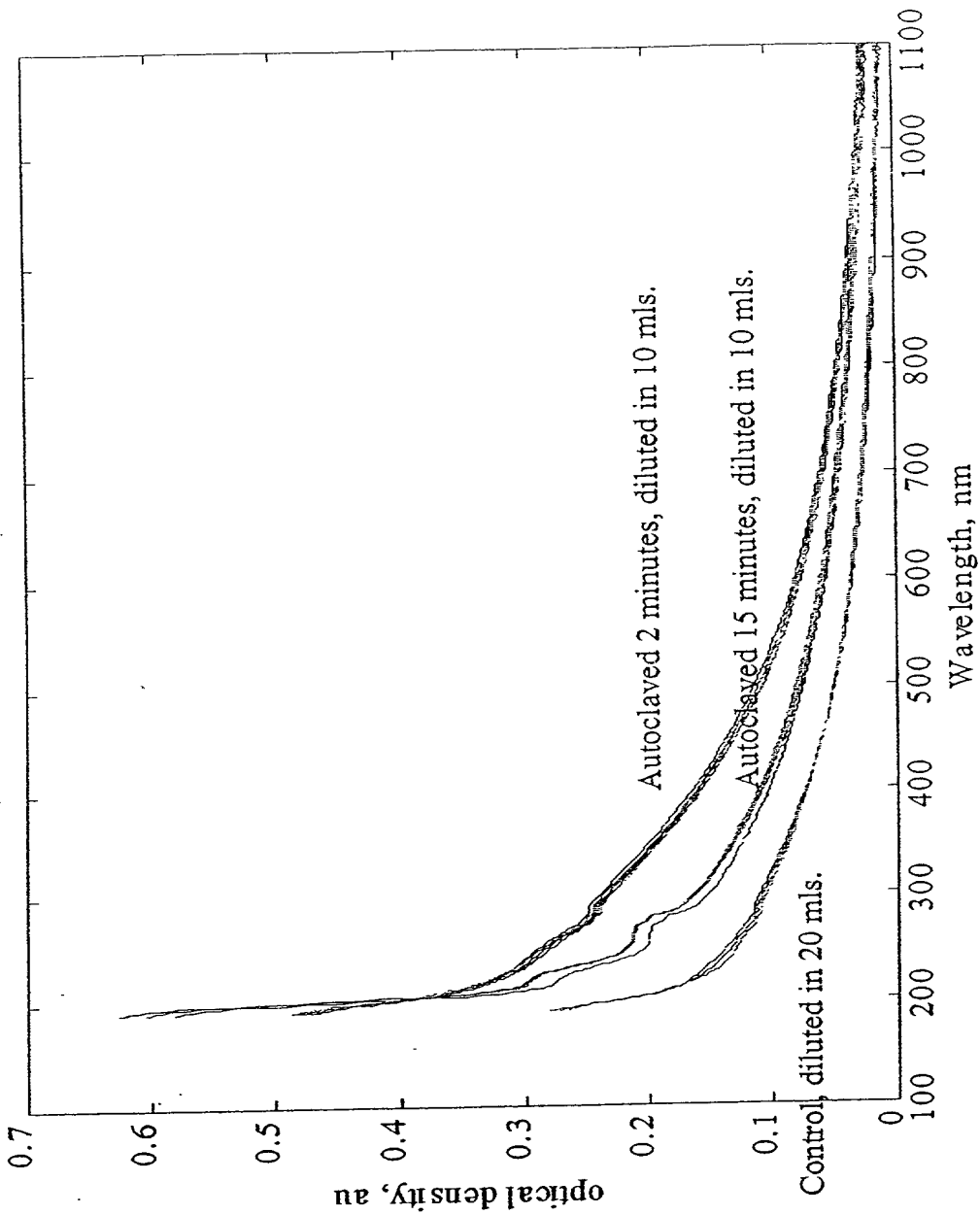


Fig. 15

004230/09216001

RESULTS PROBLEM No: Time 2 hours

ESTIMATES FOR A SINGLE POPULATION

Mie Average Diameter (cm) = 2.570334E-04 +/- 3.302753E-05  
Concentration (g/mL) meas. = 2.028209E-06  
Concentration (g/mL) calc. = 2.028209E-06 +/- 2.261741E-07  
Particle No (#/mL) = 228110.500000

Residual sum of squares = 5.012901E-05  
Res. sum of squares (Norm) = 2.879399E-01  
Standard Dev. (Residuals) = 3.019001E-04  
Standard Dev. (Norm. Res) = 2.288071E-02

RESULTS PROBLEM No: Time 4 hours

ESTIMATES FOR A SINGLE POPULATION

Mie Average Diameter (cm) = 1.969644E-04 +/- 1.826982E-06  
Concentration (g/mL) meas. = 3.055250E-05  
Concentration (g/mL) calc. = 3.055250E-05 +/- 2.933861E-07  
Particle No (#/mL) = 7636334.000000

Residual sum of squares = 5.679470E-03  
Res. sum of squares (Norm) = 2.113989E-01  
Standard Dev. (Residuals) = 3.213458E-03  
Standard Dev. (Norm. Res) = 1.960514E-02

RESULTS PROBLEM No: Time 3 hours

ESTIMATES FOR A SINGLE POPULATION

Mie Average Diameter (cm) = 2.672413E-04 +/- 7.599205E-06  
Concentration (g/mL) meas. = 9.346907E-06  
Concentration (g/mL) calc. = 9.346907E-06 +/- 2.200983E-07  
Particle No (#/mL) = 933316.800000

Residual sum of squares = 2.789136E-03  
Res. sum of squares (Norm) = 7.187017E-01  
Standard Dev. (Residuals) = 2.251923E-03  
Standard Dev. (Norm. Res) = 3.614872E-02

RESULTS PROBLEM No: Time 5 hours

ESTIMATES FOR A SINGLE POPULATION

Mie Average Diameter (cm) = 1.405828E-04 +/- 1.859756E-06  
Concentration (g/mL) meas. = 2.712445E-05  
Concentration (g/mL) calc. = 2.712445E-05 +/- 4.164035E-07  
Particle No (#/mL) = 1.864516E+07

Residual sum of squares = 9.585535E-04  
Res. sum of squares (Norm) = 8.134952E-02  
Standard Dev. (Residuals) = 1.320161E-03  
Standard Dev. (Norm. Res) = 1.216175E-02

Fig. 16





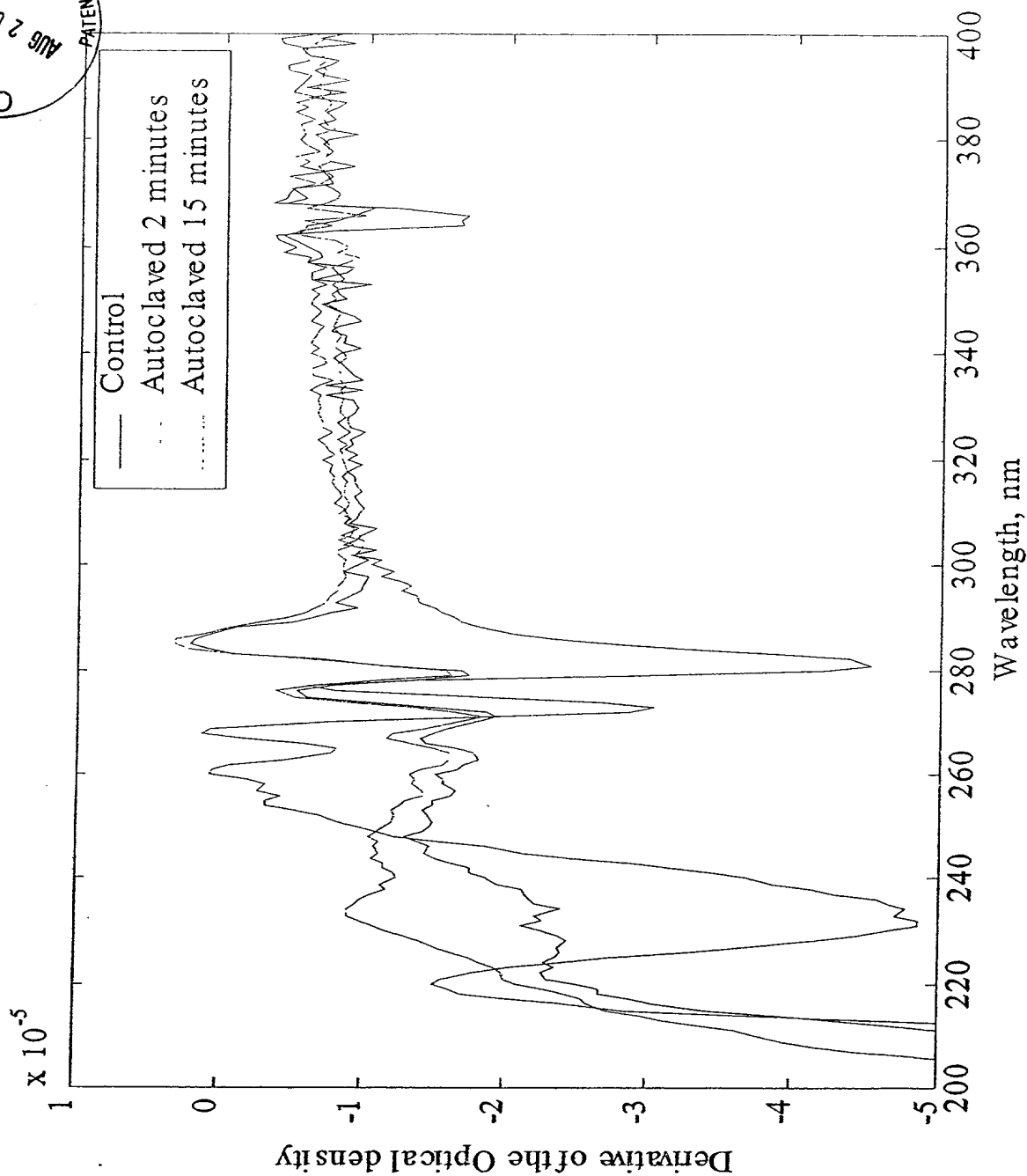


Fig. 18

Fractionation Curve of *B. subtilis* in 0.42% NaCl Solution

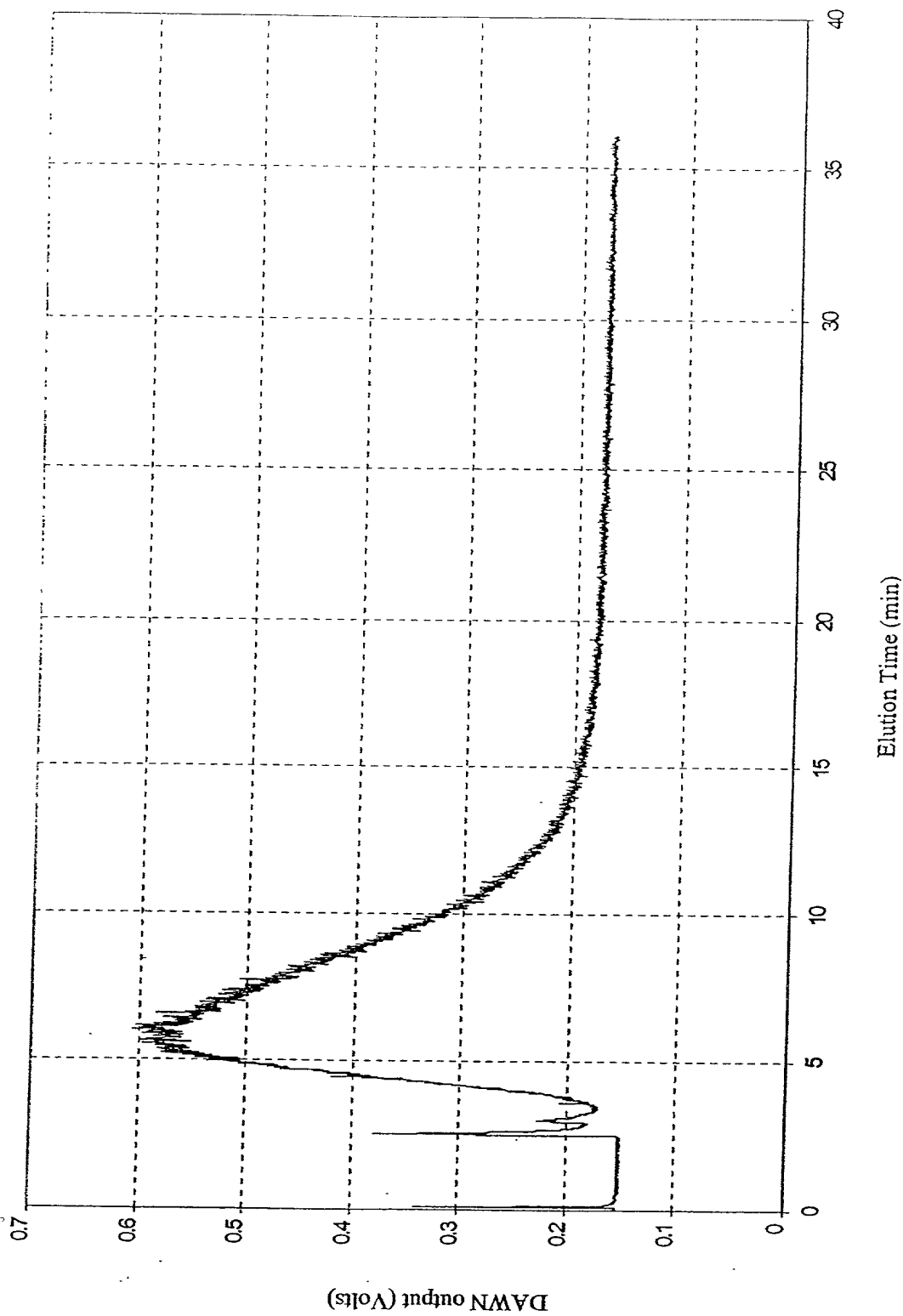


Fig. 19

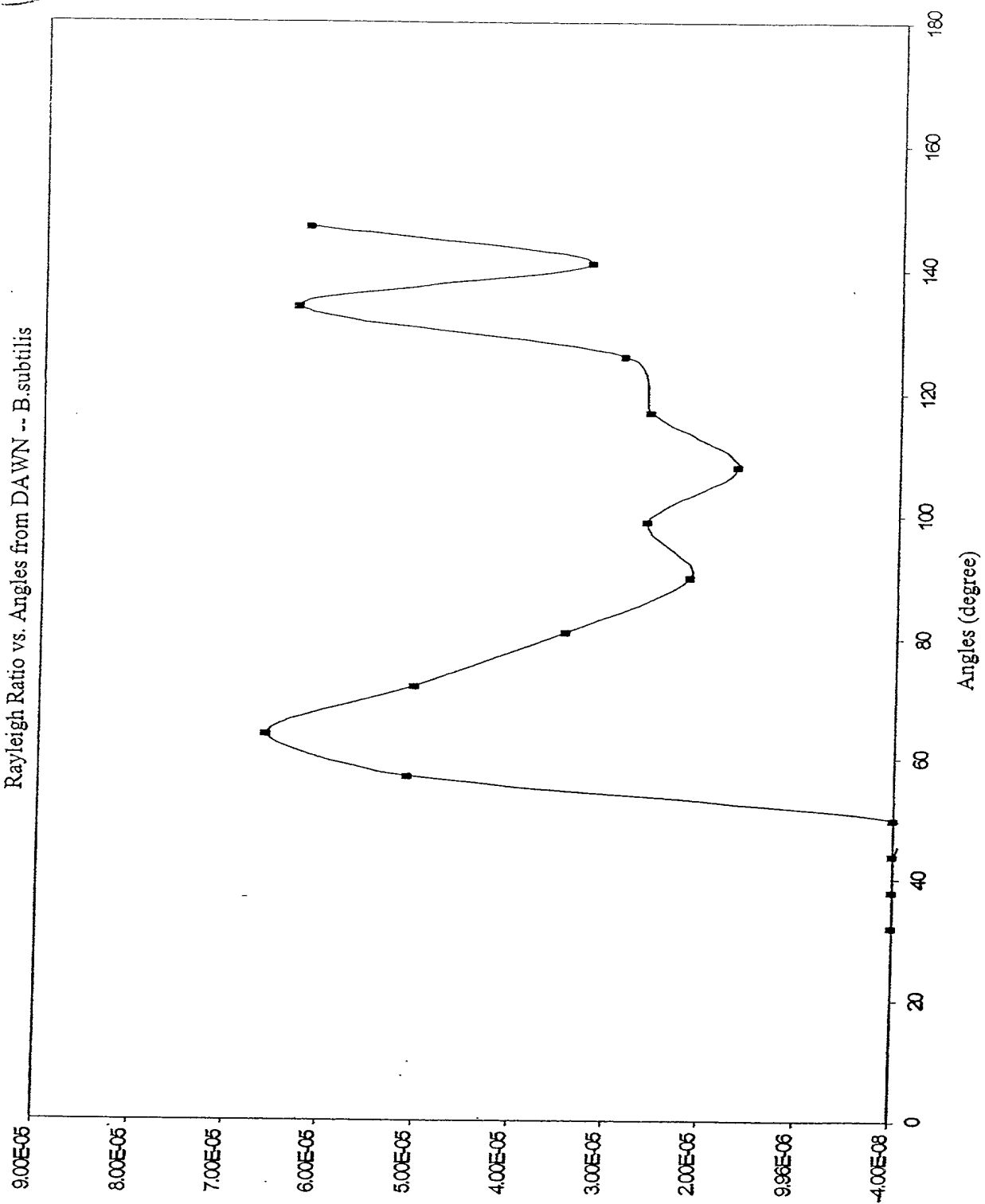


100-442888-100

**Indicator of Sterilization** Inventors: Ira Cecil

3. Methods: Compositions and Rites for Bishops

Rayleigh Ratio



**Fig. 20**

Rayleigh Ratio vs. Angles from DAWN -- B.subtilis

# THE UNIVERSITY OF CHICAGO



005250/052600

Polar plot of *B. globigii*

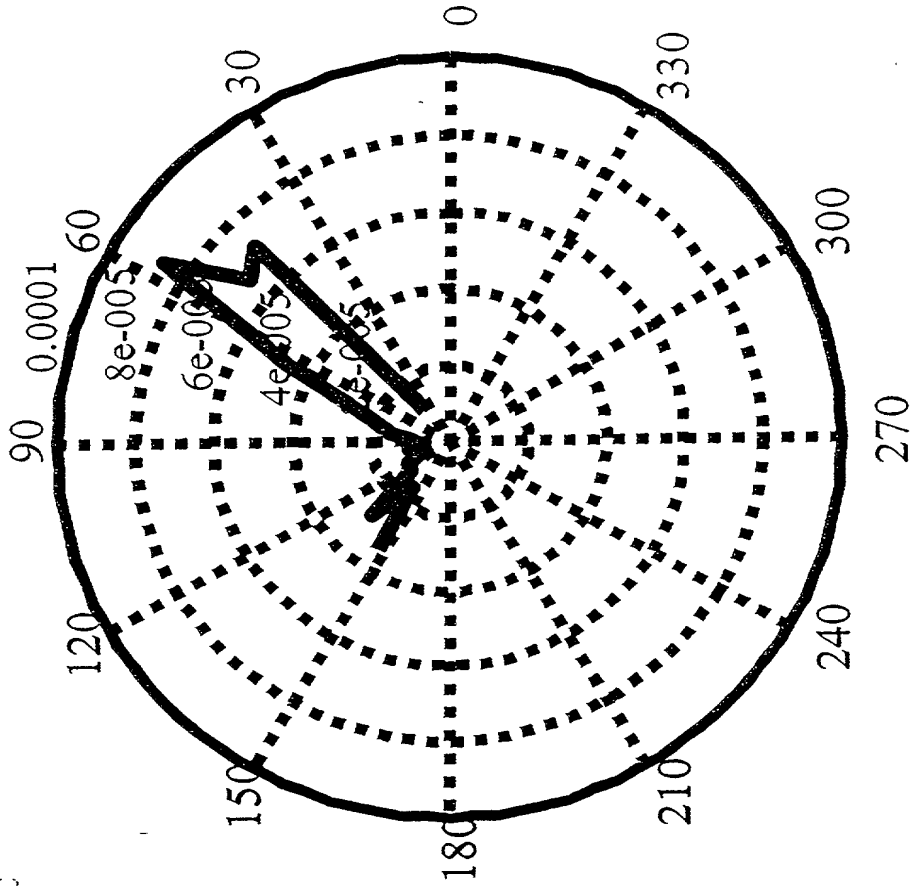


Fig. 21





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Polar plot of *B. subtilis*

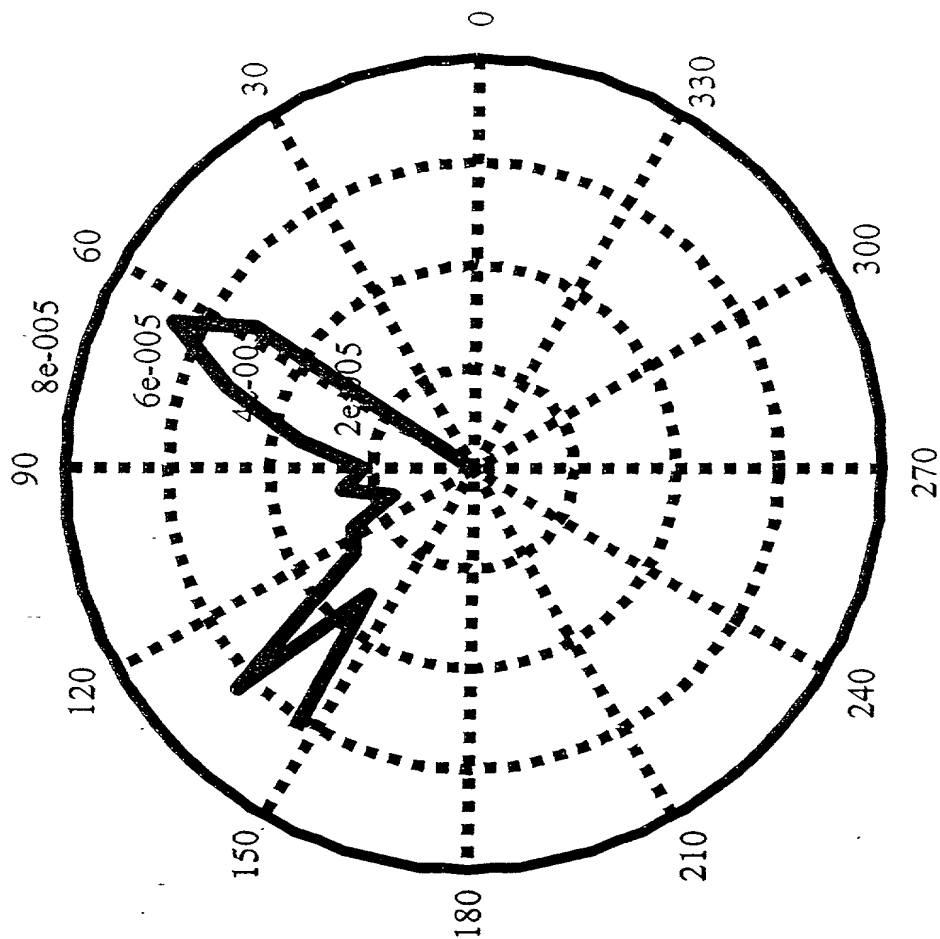
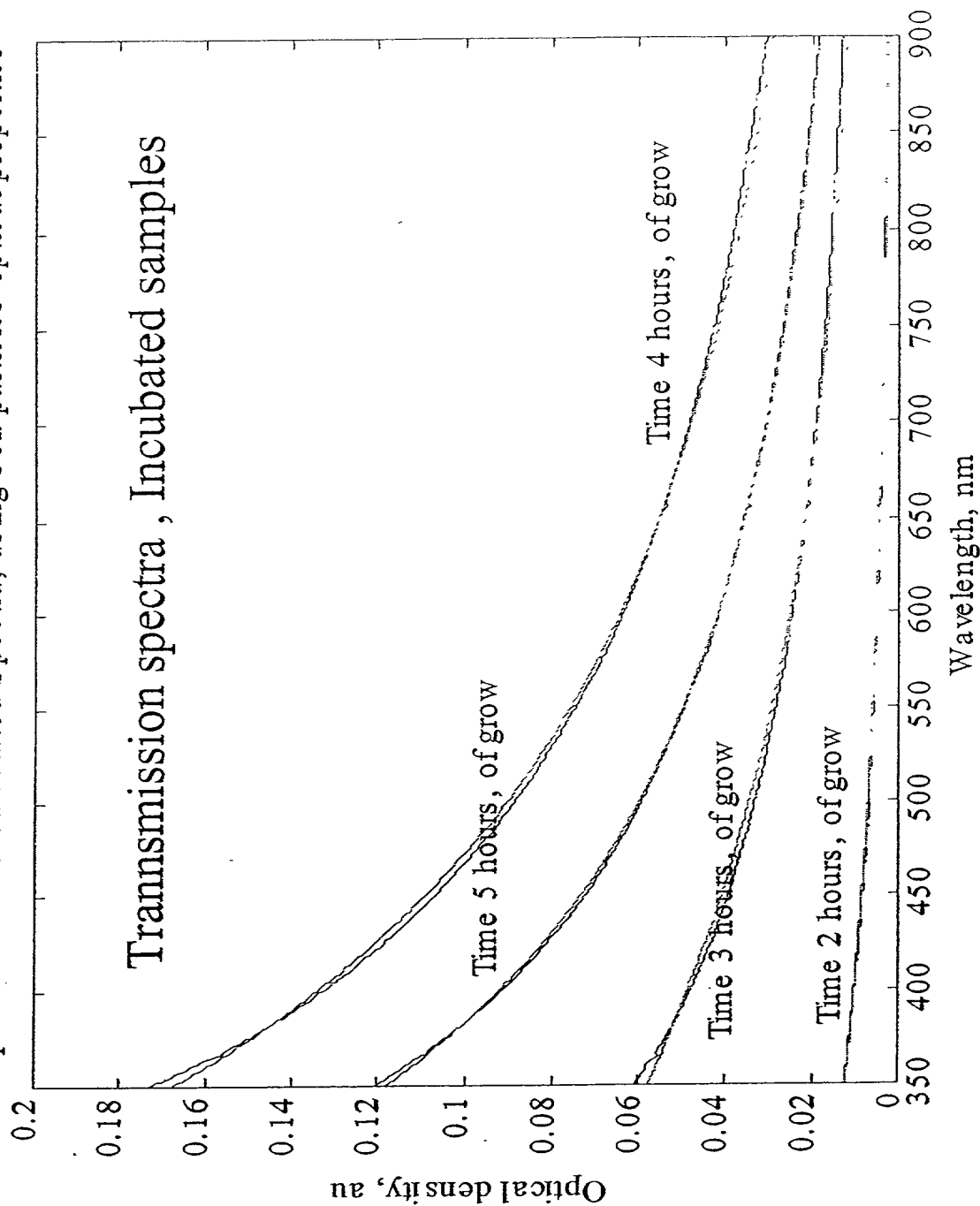


Fig. 22

Title: Methods, Compositions and Kits for Biological  
Indicator of Sterilization Inventors: Ira Cecil  
Felkner, et al. Appl. No.: 10/091,260  
Atty Docket No. 61-2U5 Cust. No. 000570

## Experimental and Calculated Spectra, using soft particles optical properties



**Fig. 23**